

## **REMARKS**

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

The Examiner rejected claims 1, 8, and 9 under 35 U.S.C. 103(a) as being unpatentable over JP 2002-200950. The Examiner's rejection is traversed for the following reason.

Applicant discloses a travel safety device for a vehicle that includes an object detecting unit, which detects an object traveling in the same direction as the vehicle, a correlation calculating unit, which calculates a correlation relating to the distance between the vehicle and the object based on the detection result of the object detecting unit, a safety unit, and a safety device operation control unit. The safety unit device includes an automatic brake unit, which automatically decelerates the vehicle, and a seatbelt device, which automatically tightens and releases the seatbelt. The safety device operation control unit determines the possibility of contact between the vehicle and the object based on the correlation calculated by the correlation calculating unit. Also, in the event that there is a possibility of a contact between the vehicle and the object, the safety device operation control unit simultaneously actuates the automatic brake unit and seatbelt device. Thus, the brake unit and the seatbelt device act simultaneously when there is a possibility of contact between the vehicle and the object.

Further, the automatic brake unit is capable of decelerating the vehicle in

multiple different deceleration patterns and the seatbelt device is capable of tightening and releasing the seatbelt in multiple different operation patterns. In addition, when the distance between the vehicle and the object enters a predetermined range based on the correlation calculated by the correlation calculating unit, the automatic brake unit causes the vehicle to decelerate to a degree, thereby allowing the occupant to recognize that a braking force has been generated. At the same time, the seatbelt device alternates between tightening and releasing of the seatbelt. Thus, the automatic braking unit and the seatbelt device together provide a warning to the occupant in anticipation of a collision.

JP 2002-200950, on the other hand, discloses an occupant protective device to prevent or reduce a collision between a vehicle and an object traveling in the same direction. JP 2002-200950 provides a means to actuate a braking unit after the seat belt device is actuated so that the maximum braking force may be applied to the vehicle. Accordingly, JP 2002-200950 does not teach all the features of claim 1. More specifically, JP 2002-200950 does not teach "wherein the safety device operation control unit simultaneously actuates the automatic brake unit and seatbelt device when it is predicted that there is a possibility of a contact."

Rather, JP 2002-200950 teaches an occupant protection device for a vehicle that includes a laser radar 9 to detect a distance between the vehicle and an object traveling in the same direction, a radar control unit 10, a seat belt control unit 15 to control the operation of a seat belt 11, a braking force control means, and a running control device 16 to manage information obtained by the control units.

Referring to paragraph [0006] of JP 2002-200950, JP 2002-200950 discloses that when the object is in a field with the vehicle where a collision can be avoided,

the seat belt 11 is rolled up by a rolling-up fixing device 13 first then the braking force control means actuates a braking effort according to the distance and relative velocity of the object.

Further, referring to paragraph [0007] of JP 2002-200950, JP 2002-200950 discloses that when the object is in a field which cannot avoid an a collision with the vehicle, the seat belt 11 is forcibly wound by a compulsive take-up motion 14 so that the occupant is firmly restricted and then the braking force control means actuates the braking effort so that a maximum braking force may be applied to the vehicle (see also the Abstract of JP 2002-200950).

Still further, paragraphs [0008] and [0010]-[0012] contain similar language. In other words, paragraphs [0008] and [0010]-[0012] all disclose that the seat belt 11 is wound and tightened before the braking force control means actuates the braking force. Thus, JP 2002-200950 teaches tightening the seat belt first and then applying the brakes. This is contrary to the present invention where, as mentioned above, the seat belt and brakes are actuated simultaneously.

The Examiner indicated that JP 2002-200950 did not clearly disclose that JP 2002-200950 simultaneously actuated the seat belt unit and brake unit. The reason for this is because JP 2002-200950 expressly discloses that the brake unit is actuated after seat belt unit, as explained above. Thus, there would be no motivation to modify JP 2002-200950 to simultaneously operate the seat belt unit and the brake unit, as suggested by the Examiner.

In addition, claim 1 has been amended to include the subject matter of claims 2 and 3. Because the Examiner did not cite JP 2002-200950 against claims 2 and 3, the Examiner admitted that JP 2002-200950 does teach the features of claims 2

and 3. Accordingly, with reference to amended claim 1, JP 2002-200950 does not teach "wherein the automatic brake unit is constructed so as to be capable of decelerating the vehicle in a plurality of different deceleration patterns, and the seatbelt device is constructed so as to be capable of tightening and releasing the seatbelt in a plurality of different operation patterns." As mentioned above, JP 2002-200950 teaches tightening the seat belt first and then applying the brakes when the object is in a field with the vehicle where a collision can be avoided. JP 2002-200950 does not disclose or suggest operating the automatic brake unit in multiple deceleration patterns or operating the seatbelt device in different operation patterns to thereby serve as a warning device for the occupant.

Based on the foregoing, it is apparent that JP 2002-200950 does not teach all the features of claim 1. Thus, reconsideration and withdrawal of the rejections of claim 1 based upon the JP 2002-200950 reference is hereby requested.

Claims 8 and 9 depend from claim 1, thus, all arguments pertaining to claim 1 are equally applicable to these claims and are herein incorporated by reference.

The Examiner rejected claims 2-7 and 10 under 35 U.S.C. 103(a) as being unpatentable over JP 2002-200950 as applied to claims 1, 8, and 9 above, and further in view of Minowa et al., U.S. Pat. Pub. No. 2001/0029418 and GB 2373220. The Examiner's rejection is traversed for the following reason.

Claims 2 and 3 have been cancelled.

Claims 4-7 and 10 depend either directly or indirectly on claim 1, thus, all arguments pertaining to claim 1 are equally applicable to these claims and are herein incorporated by reference.

Further, Applicant submits that Minowa or GB 2373220 do not correct or

eliminate the deficiencies of the primary reference, JP 2002-200950, as they relate to claim 1.

Minowa discloses a system of accelerating a car using a brake operating system. Specifically, Minowa discloses a pedal for a car that controls both the driving force and the braking force of the car. Minowa, however, does not disclose a seat belt unit and thus, cannot teach simultaneous operation of a seat belt unit and a brake unit as required by claim 1. Thus, Minowa does not correct or eliminate the deficiencies of JP 2002-200950 as they relate to claim 1.

GB 2373220 discloses an automotive restraint and protection system. More specifically, GB 2373220 discloses an automotive restraint and protection system that includes a seatbelt and a seatbelt driving means, such as a motor, able to protract or retract the seatbelt. The system further includes a warning means that signals the controller of the seatbelt motor if a collision danger status has been predicted. If the collision danger status has been set, the seatbelt is alternately protracted and retracted thus applying periodically increasing and decreasing pressure on the seatbelt wearer, thereby alerting the wearer of an impending collision. GB 2373220, however, does not disclose a brake unit and thus, cannot teach simultaneous operation of a seat belt unit and a brake unit as required by claim 1. Thus, GB 2373220 does not correct or eliminate the deficiencies of JP 2002-200950 as they relate to claim 1.

Therefore, Applicant submits that claims 4-7 and 10 are allowable over the proposed combination of the references.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is

determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. SHG-16197.

Respectfully submitted,

RANKIN, HILL & CLARK LLP

By /Ronald S. Nolan/  
Ronald S. Nolan, Reg. No. 59271  
Patent Agent

38210 Glenn Avenue  
Willoughby, Ohio 44094-7808  
(216) 566-9700